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Alberta AGRICULTURE

February 1991

Agdex 149/33-19

Varietal Description of Hero Spring Rapeseed

Origin and breeding

Hero, tested as S82-4362, was developed at the University of Manitoba, Winnipeg, Manitoba. The variety was derived from a cross between Reston and a high erucic acid variety from Sweden in 1979. The breeder used single plant pedigree selection in the F_2 generation and subsequent multiplication to develop the variety. Selection was based on high erucic acid, low glucosinolate content and high oil and protein contents as well as agronomic traits. Breeder seed was derived in 1984 from an isolated bulk seed increase in the F_4 generation.

Varietal characteristics

Plant characteristics

Cotyledon: broad width

Seedling growth habit: upright

Stem: weak anthocyanin

Leaves: medium green with slight waxy bloom; weak lobing; weak serration; partial clasping attachment to stem; glabrous

Flowers: yellow; buds at tip of apical meristem; early flowering date, similar to Westar

Pods: medium length and width; semi-erect; medium beak length; short pedicel

Plant height: medium

Shattering resistance: medium

Lodging resistance: medium

Maturity: similar to Westar, earlier than Reston

Disease reaction: moderately susceptible to black leg *(Leptosphaeria maculans)*; equal to Westar and Global for root rot resistance *(Rhizoctonia solani)*; equal to Westar for white rust resistance *(Albugo candida)*.

Seed characteristics

Seed weight: 3.5 g/1000 seeds

Color: brown

Erucic acid content: greater than 50 per cent

Oil content: high; similar to Westar

Protein content: 1.8 per cent higher than Westar

Glucosinolate content: 15 micromoles per gram oil free meal; slightly higher than Westar

Chlorophyll content: low

Performance

Hero is a variety with improved protein levels, early maturity, high erucic acid levels combined with low glucosinolate content and a yield comparable to that of Regent.

Maintenance of breeder seed

Department of Plant Science, University of Manitoba

Canadian distributor

CSP Foods

Recommended by

Western Canada Canola/Rapeseed Registration Recommending Committee

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Table 1. Performance of Hero and check varieties, Western Canadian Rapeseed Co-op A Trials, 1986-88*

Variety	Year	Days to Maturity	Height (cm)	Lodging (1-5)	Oil (%)	Protein in Meal (%)	Chloro-phyll (ppm)	Gluc. (μmol/g)	Blackleg Disease Rating Saskatoon (0-100**)	Elgin (0-5)**
Hero	1986	100	91	2.4	44.9	46.6	—	12.7	71.1	0.65***
	1987	100	88	2.2	42.9	48.6	16	18.4	27.8	1.6
	1988	98	90	1.8	44.6	47.9	6	15.5	—	2.2
	Mean	99	89	2.2	44.1	47.7	12	15.5	—	—
Westar	1986	101	101	2.2	44.3	45.1	—	9.5	82.0	2.1***
	1987	100	96	2.6	43.7	47.0	34	12.3	32.3	4.1
	1988	98	97	1.8	44.4	45.4	19	10.4	—	2.9
	Mean	100	98	2.3	44.1	45.9	27	10.8	—	—
Regent	1986	103	106	2.3	43.7	46.4	—	13.6	58.1	1.3***
	1987	103	105	2.0	43.1	47.7	29	13.7	17.0	2.7
	1988	100	101	1.8	43.9	46.0	21	13.0	—	2.2
	Mean	102	104	2.1	43.5	46.8	25	13.5	—	—

*See Table 2 for locations
**0 = no disease
***Melfort site in 1986

Table 2. Seed Yield (00's kg/ha) of Hero and Check Varieties by Climatic Region, Western Canadian Rapeseed Co-op A Trials, 1986-88*

Variety	Year	Long Season Zone	Mid-Season Zone	Short Season Zone	Irrigated Zone	Mean
Hero	1986	20.2	17.8	18.0	36.1	19.0
	1987	19.2	20.9	26.9	31.5	22.9
	1988	24.3	17.2	21.5	28.3	20.4
	Mean	20.3	18.8	22.4	31.1	20.8
Westar	1986	23.2	20.4	21.3	40.4	21.9
	1987	21.9	24.8	31.7	28.3	26.3
	1988	28.3	21.0	27.7	33.8	25.1
	Mean	23.3	22.2	27.1	32.9	24.3
Regent	1986	20.5	18.1	17.2	39.4	19.1
	1987	17.2	21.2	21.8	24.3	20.8
	1988	26.4	19.7	24.1	33.0	23.1
	Mean	19.9	19.6	20.8	30.8	20.6

*Short season: Beaverlodge, Fairview, Fort Vermilion, Penhold, Olds, Delacour, Loon Lake.
Medium season: Indian Head, Lashburn, Melfort, Carrot River, Saskatoon, Scott, Regina, Watrous, Somme, Meath Park, Kelsey, Ellerslie, Glaslyn, Swan River, Vermilion, Westlock, Ituna.
Long season: Winnipeg, Portage la Prairie, Brandon, Morden, Carman, Altona, Miami, Lethbridge (dry).
Irrigated: Lethbridge, Outlook.

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